

Similarity Review

ANSWER KEY

1) $2x + x = 90$
 $3x = 90$
 $x = 30$

$30^\circ, 60^\circ$
 \uparrow
 $(2 \cdot 30)$

2) $3x + 4x + 8x = 60$
 $15x = 60$
 $x = 4$

$12, 16, 32 \text{ cm}$
 $\uparrow \quad \uparrow \quad \uparrow$
 $(3 \cdot 4) \quad (4 \cdot 4) \quad (8 \cdot 4)$

3) $\frac{1}{4} = \frac{3}{x}$

$\frac{1}{4}x = 3$

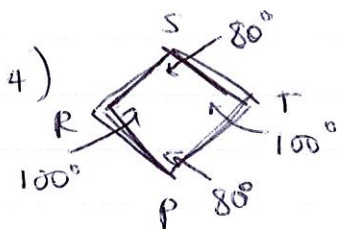
$x = 12$

$\frac{1}{4} = \frac{3}{x}$

$\frac{1}{4}x = \frac{3}{4}$

$x = 3$

$12 \text{ ft} \times 3 \text{ ft}$



\angle s are not \cong , so they are NOT similar.

5) Yes, by AA (If two \angle s of one Δ are \cong to two \angle s in another Δ , then the Δ s are similar)
 OR

Yes, b/c $\frac{8.4}{6} = \frac{6.3}{4.5} = \frac{3.5}{2.5}$

$\Delta ABC \sim \Delta FED$

6) $\frac{8}{6} = \frac{x}{12}$

$96 = 6x$

$16 = x$

$\frac{8}{6} = \frac{10}{z}$

$8z = 60$

$z = 7.5$

$\frac{8}{6} = \frac{6}{y}$

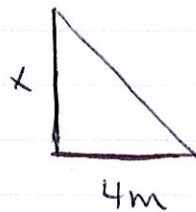
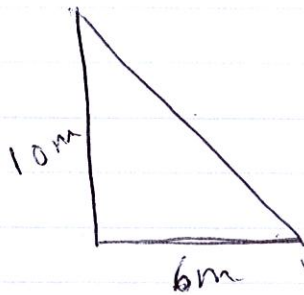
$36 = 8y$

$4.5 = y$

Scale Factor
 is $\frac{8}{6}$ OR $\frac{4}{3}$

7) Sometimes two isosceles triangles are similar. They are similar only when angles are congruent and sides are proportional.

8)

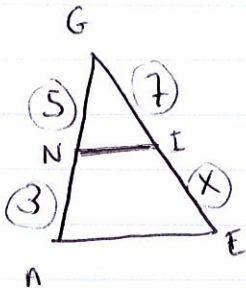


$$\frac{4}{6} = \frac{x}{10}$$

$$40 = 6x$$

$$6.\bar{6} = x$$

9)



$$\frac{5}{8} = \frac{7}{7+x}$$

$$5(7+x) = 8 \cdot 7$$

$$35 + 5x = 56$$

$$\frac{5x}{5} = \frac{21}{5}$$

$$x = 4.2$$

$$\triangle GNI \sim \triangle GAE$$

$$10) \frac{x+4}{6} = \frac{4}{3}$$

$$3(x+4) = 6 \cdot 4$$

$$3x + 12 = 24$$

$$3x = 12$$

$$x = 4$$